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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,412	05/04/2004	Wen-Chang Yeh	11340-US-PA	3411
31561 7590 01/24/2007 JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE 7 FLOOR-1, NO. 100 ROOSEVELT ROAD, SECTION 2 TAIPEI, 100 TAIWAN			EXAMINER HARRISON, MONICA D	
			ART UNIT	PAPER NUMBER
			2813	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/709,412

Applicant(s)

YEH, WEN-CHANG

Examiner

Monica D. Harrison

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 1-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group II, claims 16-21, in the reply filed on September 19, 2006 is acknowledged. Examiner acknowledges claims 1-15 have been cancelled.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 16 and 18-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Tasch Jr. et al (4,409,724).

2. Regarding claim 16, Tasch Jr. et al discloses a structure of thin-film transistor (TFT), comprising: a poly-crystal semiconductor island (Figure 8, reference 14), formed on a substrate (Figure 8, reference 10), wherein the poly-crystal semiconductor island is with respect to a rectangular region having a long side and a short side (Figure 7, reference 14), wherein a plurality long-shape crystal grains from a center strip region along the direction of the long side to the long side (*crystal grains are formed by the annealing of the polycrystalline semiconductor film*); a gate insulating film, over the semiconductor island (Figure 8, reference 20); and a strip gate, located on the gate insulating film between the center grain boundary and the long side,

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wherein a direction of the strip gate is along the direction of the long side (Figure 8, reference 21); and a source region (Figure 8, reference 18) and a drain region (Figure 8, reference 19) are parts of the semiconductor island (Figure 7, reference 14) at each side of the strip gate (Figure 8, reference 21).

3. Regarding claim 18, Tasch Jr. et al discloses wherein the semiconductor island has a saw-like periphery along the long sides (Figure 8, reference 14; *saw-like may be created by the annealing of the polycrystalline layer*).

4. Regarding claim 19, Tasch Jr. et al discloses a strip semiconductor peninsula joining to one side of the semiconductor island (Figure 8, reference 21).

5. Regarding claim 20, Tasch Jr. et al discloses wherein the center strip region is a center grain boundary (Figure 8, reference 21).

6. Regarding claim 21, Tasch Jr. et al discloses wherein the semiconductor island is used as an active island of the thin-film transistor without additional patterning (Figure 8, reference 14).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tasch Jr. et al (4,409,724) in view of Ngochi et al (6,190,949 B1).

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7. Tasch Jr. et al discloses all above claimed subject matter except wherein the number of the long crystal grains is determined by a ratio of the long side to the short side (claim 17).

Ngochi et al discloses wherein the number of the long crystal grains is determined by a ratio of the long side to the short side (column 8, lines 17-47).

It is obvious, at the time the invention was made, for one having ordinary skill in the art, to modify Tasch Jr. et al, with the teachings of Ngochi et al, for the purpose of forming single crystal grains in a semiconductor device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica D. Harrison whose telephone number is 571-272-1959. The examiner can normally be reached on M-F 7:00am-3:30pm.

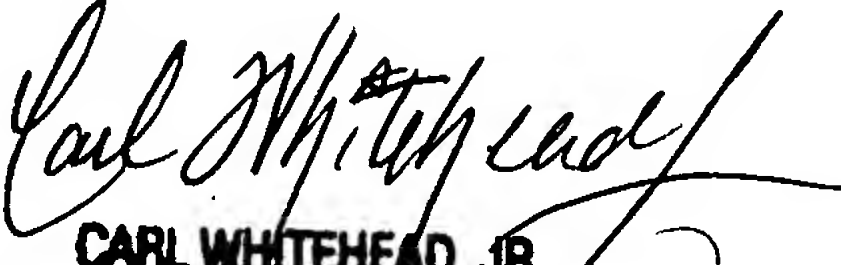
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr. can be reached on 571-272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Monica D. Harrison
AU 2813

mdh
January 18, 2007


CARL WHITEHEAD, JR.
SUPERVISORY PATENT EXAMINER
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